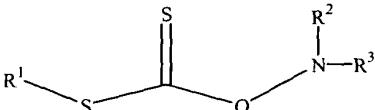


What is claimed is:

1        1. A compound characterized by the general formula:

2                    
3        wherein R<sup>1</sup> is any group that can be expelled as its free radical form in an addition-  
4        fragmentation reaction;  
5        R<sup>2</sup> and R<sup>3</sup> are each independently selected from the group consisting of hydrogen,  
6        hydrocarbyl, substituted hydrocarbyl, heteroatom-containing hydrocarbyl, substituted  
7        heteroatom-containing hydrocarbyl, and combinations thereof, and optionally R<sup>2</sup> and R<sup>3</sup>  
8        are joined together in a ring structure having from 3 to 50 atoms in the backbone of the  
9        ring; also optionally, R<sup>2</sup> and R<sup>3</sup> are joined together to form a double bond optionally  
10      substituted alkenyl moiety.

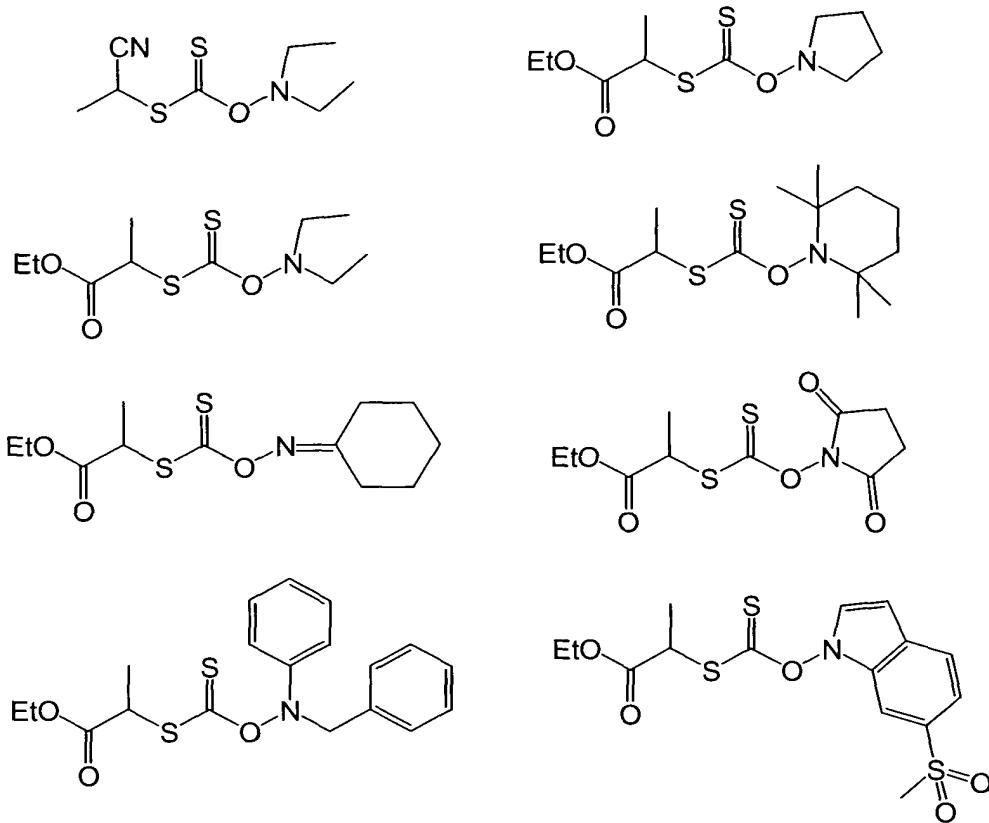
1        2. The compound of claim 1, wherein R<sup>1</sup> is selected from the group consisting of  
2        optionally substituted alkyl, optionally substituted aryl, optionally substituted alkenyl,  
3        optionally substituted alkoxy, optionally substituted heterocyclyl, optionally substituted  
4        alkylthio, optionally substituted amino and optionally substituted polymer chains.

1        3. The compound of claim 2, wherein R<sup>1</sup> is selected from the group consisting of  
2        -CH<sub>2</sub>Ph, -CH(CH<sub>3</sub>)CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -CH(CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -C(CH<sub>3</sub>)<sub>2</sub>CN, -CH(Ph)CN,  
3        -C(CH<sub>3</sub>)<sub>2</sub>Ph, -CH(CH<sub>3</sub>)CN, and -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>.

1        4. The compound of claim 1, wherein R<sup>2</sup> and R<sup>3</sup> are each independently selected  
2        from the group consisting of hydrogen, optionally substituted alkyl, optionally  
3        substituted aryl, optionally substituted alkenyl, optionally substituted acyl, optionally  
4        substituted, aroyl, optionally substituted alkoxy, optionally substituted heteroaryl,  
5        optionally substituted heterocyclyl, optionally substituted alkylsulfonyl, optionally  
6        substituted alkylsulfinyl, optionally substituted alkylphosphonyl, optionally substituted  
7        arylsulfinyl, and optionally substituted arylphosphonyl.

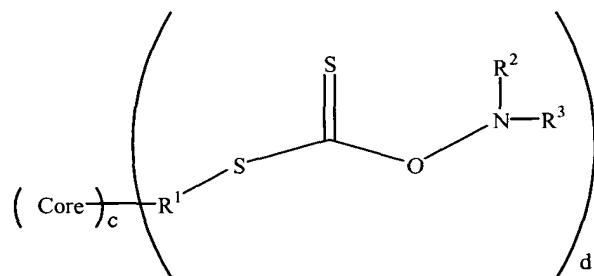
8        5. The compound of claim 1, wherein R<sup>2</sup> and R<sup>3</sup> form an optionally substituted  
9        heterocycle ring.

10        6. The compound of claim 1, wherein the compound is selected from the group  
11      consisting of:

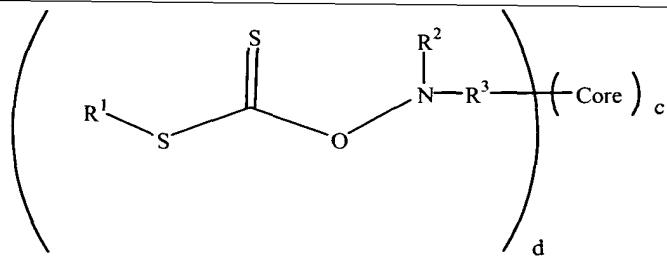


12

13        7. A compound characterized from any of the following general formulas:



14



15 wherein R<sup>1</sup> is any group that can be expelled as its free radical form in an  
16 addition-fragmentation reaction;

17 R<sup>2</sup> and R<sup>3</sup> are each independently selected from the group consisting of hydrogen,  
18 hydrocarbyl, substituted hydrocarbyl, heteroatom-containing hydrocarbyl, and  
19 substituted heteroatom-containing hydrocarbyl, and combinations thereof; and optionally  
20 R<sup>2</sup> and R<sup>3</sup> together to form a double bond optionally substituted alkenyl moiety; and also  
21 optionally R<sup>2</sup> and R<sup>3</sup> together joined in a ring structure having from 3 to 50 atoms in the  
22 ring backbone;

23 Core is a core molecule;

24 c is 1 or more; and

25 d is 2 or more.

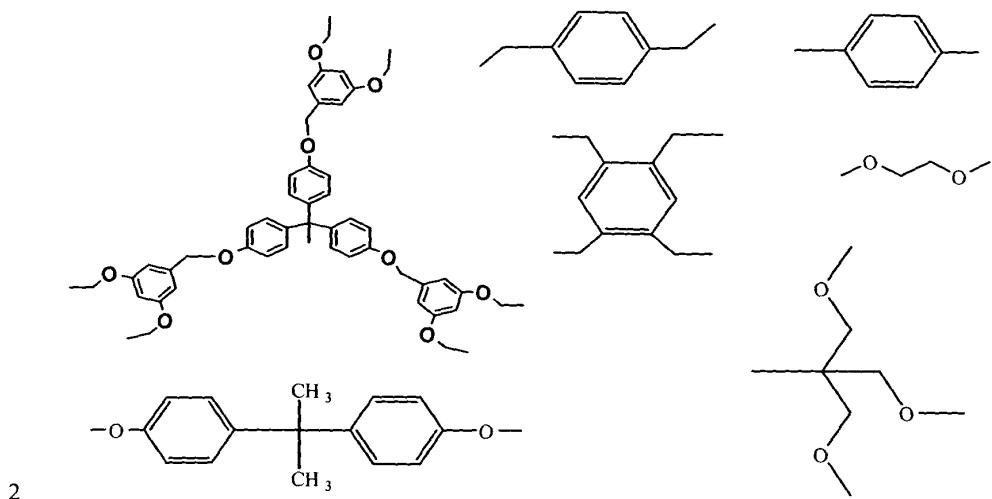
1 8. The compound of claim 7, wherein R<sup>1</sup> is selected from the group consisting of  
2 optionally substituted alkyl, optionally substituted aryl, optionally substituted alkenyl,  
3 optionally substituted alkoxy, optionally substituted heterocycl, optionally substituted  
4 alkylthio, optionally substituted amino and optionally substituted polymer chains.

1 9. The compound of claim 8, wherein R<sup>1</sup> is selected from the group consisting of -  
2 CH<sub>2</sub>Ph, -CH(CH<sub>3</sub>)CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -CH(CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -C(CH<sub>3</sub>)<sub>2</sub>CN, -CH(Ph)CN and  
3 -C(CH<sub>3</sub>)<sub>2</sub>Ph, -CH(CH<sub>3</sub>)CN, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>.

1 10. The compound of claim 7, wherein R<sup>2</sup> and R<sup>3</sup> are each independently selected  
2 from the group consisting of hydrogen, optionally substituted alkyl, optionally  
3 substituted aryl, optionally substituted alkenyl, optionally substituted acyl, optionally  
4 substituted, aroyl, optionally substituted alkoxy, optionally substituted heteroaryl,  
5 optionally substituted heterocycl, optionally substituted alkylsulfonyl, optionally  
6 substituted alkylsulfinyl, optionally substituted alkylphosphonyl, optionally substituted  
7 arylsulfinyl, and optionally substituted arylphosphonyl.

1 11. The compound of claim 7, wherein wherein R<sup>2</sup> and R<sup>3</sup> form an optionally  
2 substituted heterocycle ring.

1 12. The compound of claim 7, wherein Core is selected from the group consisting of:



1        13. The compound of claim 7, wherein the compound is selected from the group  
2        consisting of:

